

Datasheets

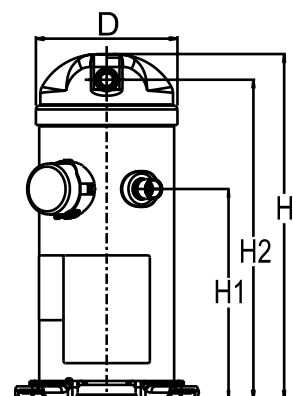
Danfoss scroll compressors **H series**



General Characteristics

Model number (on compressor nameplate)		HRH031U5LP6
Code number for Singlepack*		120U1166
Code number for Industrial pack**		120U1163
Drawing number		0XC6301B-2
Suction and discharge connections		Brazed
Suction connection		3/4 " ODF
Discharge connection		1/2 " ODF
Oil sight glass		None
Oil equalisation connection		None
Oil drain connection		None
LP gauge port		None
IPR valve		Yes
Swept volume		29.69 cm ³ /rev
Displacement @ Nominal speed		5.2 m ³ /h @ 2900 rpm
Net weight		30.84 kg
Oil charge		1.06 litre, PVE --
Maximum system test pressure Low Side / High side		- bar(g) / - bar(g)
Maximum differential test pressure		- bar
Maximum number of starts per hour		-
Refrigerant charge limit		3.63 kg
Approved refrigerants		R410A

Dimensions

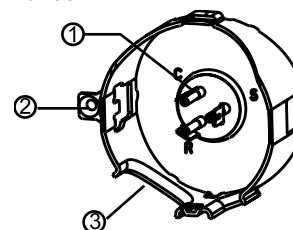


D=164.5 mm
H=413 mm
H1=250 mm
H2=379 mm
H3=- mm

Electrical Characteristics

Nominal voltage	230V/1/50Hz
Voltage range	207-253 V
Winding resistance (main / start) at 25°C	0.689 Ω / 1.509 Ω
Run capacitors A + C	70 μF + - μF
Start capacitor B	145-175 μF
Start relay	3ARR3*3AL*
Rated Load Amps (RLA)	16 A
Maximum Continuous Current (MCC)	25 A
Locked Rotor Amps (LRA)	97 A
Motor protection	Internal overload protector

Terminal box



IP22
1: Spade connectors 1/4"
2: Earth connection
3: Power cable passage

Recommended Installation torques

Oil sight glass	52.5 Nm
Power connections / Earth connection	0 Nm / 0 Nm

Parts shipped with compressor

Mounting kit with grommets and sleeves
Initial oil charge
Installation instructions

Approvals : CE certified, UL certified (file SA11565), -
*Singlepack: Compressor in cardboard box
**Industrial pack: 12 or 16 Unboxed compressors on pallet

Rotolock accessories, suction side

Code no.

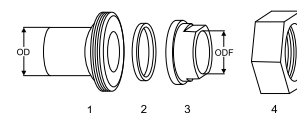
Solder sleeve, P04 (1-1/4" Rotolock, 3/4" ODF)	8153008
Angle adapter, C04 (1-1/4" Rotolock, 3/4" ODF)	8168006
Rotolock valve, V04 (1-1/4" Rotolock, 3/4" ODF)	8168029
Gasket, 1-1/4"	8156131

Rotolock accessories, discharge side

Code no.

Solder sleeve, P06 (1" Rotolock, 1/2" ODF)	8153007
Angle adapter, C06 (1" Rotolock, 1/2" ODF)	8168007
Rotolock valve, V06 (1" Rotolock, 1/2" ODF)	8168031
Gasket, 1"	8156130

Solder sleeve adapter set



- 1: Rotolock adapter (Suc & Dis)
- 2: Gasket (Suc & Dis)
- 3: Solder sleeve (Suc & Dis)
- 4: Rotolock nut (Suc & Dis)

Rotolock accessories, sets

Code no.

Solder sleeve adapter set (1-1/4" Rotolock, 3/4" ODF), (1" Rotolock, 1/2" ODF)	120Z0126
Gasket set, 1", 1-1/4", 1-3/4", OSG gaskets black & white	8156009

Oil / lubricants

Code no.

PVE lubricant, 320HV (FVC68D), 1 litre can	120Z5034
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Crankcase heaters

Code no.

Belt type crankcase heater, 40 W, 230 V, CE mark, UL	120Z0055
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Miscellaneous accessories

Code no.

Acoustic hood	120Z5043
Discharge thermostat kit	7750009
IP54 upgrade kit	118U0056

Spare parts

Code no.

Mounting kit for 1 scroll compressor including 4 grommets, 4 sleeves, 4 bolts, 4 washers	120Z5005
Mounting kit, including 1 bolt, 1 sleeve, 1 washer	120Z5031
No translation for 120Z5015	120Z5015

Performance data at 50 Hz, EN 12900 rating conditions
R410A

Cond. temp. in °C (tc)	Evaporating temperature in °C (to)							
	-25	-20	-15	-10	-5	0	5	10

Cooling capacity in W

30	2 254	3 108	4 106	5 215	6 400	7 628	8 866	10 078	-
35	1 970	2 797	3 767	4 847	6 004	7 203	8 411	9 595	-
40	-	2 463	3 407	4 461	5 591	6 763	7 944	9 101	-
45	-	-	3 009	4 039	5 143	6 290	7 446	8 578	-
50	-	-	-	3 564	4 644	5 767	6 898	8 006	-
55	-	-	-	-	4 076	5 174	6 280	7 364	-
60	-	-	-	-	-	4 491	5 569	6 625	-
65	-	-	-	-	-	-	4 730	5 749	-

Power input in W

30	1 695	1 689	1 661	1 617	1 566	1 514	1 468	1 436	-
35	1 918	1 906	1 874	1 827	1 774	1 722	1 677	1 647	-
40	-	2 163	2 121	2 067	2 007	1 950	1 901	1 868	-
45	-	-	2 412	2 345	2 274	2 205	2 147	2 107	-
50	-	-	-	2 670	2 582	2 498	2 426	2 372	-
55	-	-	-	-	2 940	2 836	2 744	2 672	-
60	-	-	-	-	-	3 227	3 111	3 017	-
65	-	-	-	-	-	-	3 536	3 413	-

Current consumption in A

30	8.50	8.37	8.53	8.88	9.29	9.66	9.88	9.83	-
35	10.72	10.37	10.33	10.50	10.75	10.99	11.10	10.97	-
40	-	11.73	11.54	11.57	11.71	11.86	11.89	11.71	-
45	-	-	12.43	12.36	12.43	12.53	12.54	12.35	-
50	-	-	-	13.15	13.19	13.28	13.30	13.15	-
55	-	-	-	-	14.27	14.39	14.46	14.39	-
60	-	-	-	-	-	16.13	16.30	16.34	-
65	-	-	-	-	-	-	19.10	19.29	-

Mass flow in kg/h

30	47	64	83	104	127	150	172	194	-
35	43	60	80	102	125	148	171	194	-
40	-	56	77	99	123	147	170	193	-
45	-	-	72	95	120	145	169	193	-
50	-	-	-	90	115	141	167	191	-
55	-	-	-	-	109	136	163	189	-
60	-	-	-	-	-	129	157	184	-
65	-	-	-	-	-	-	149	177	-

Coefficient of performance (C.O.P.)

30	1.33	1.84	2.47	3.22	4.09	5.04	6.04	7.02	-
35	1.03	1.47	2.01	2.65	3.38	4.18	5.02	5.82	-
40	-	1.14	1.61	2.16	2.79	3.47	4.18	4.87	-
45	-	-	1.25	1.72	2.26	2.85	3.47	4.07	-
50	-	-	-	1.33	1.80	2.31	2.84	3.38	-
55	-	-	-	-	1.39	1.82	2.29	2.76	-
60	-	-	-	-	-	1.39	1.79	2.20	-
65	-	-	-	-	-	-	1.34	1.68	-

Nominal performance at to = 5 °C, tc = 50 °C

Cooling capacity	6 898	W
Power input	2 426	W
Current consumption	13.30	A
Mass flow	167	kg/h
C.O.P.	2.84	

Pressure switch settings

Maximum HP switch setting	45	bar(g)
Minimum LP switch setting	1.5	bar(g)
LP pump down setting	2.3	bar(g)

Sound power data

Sound power level	65	dB(A)
With acoustic hood	60	dB(A)

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

Rating conditions : Superheat = 10 K , Subcooling = 0 K

All performance data +/- 5%

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Performance data at 50 Hz, ARI rating conditions

R410A

Cond. temp. in °C (tc)	Evaporating temperature in °C (to)							
	-25	-20	-15	-10	-5	0	5	10

Cooling capacity in W

30	2 434	3 353	4 425	5 615	6 885	8 199	9 521	10 814	-
35	-	3 036	4 085	5 251	6 497	7 788	9 086	10 355	-
40	-	-	3 722	4 868	6 094	7 364	8 641	9 890	-
45	-	-	3 318	4 447	5 656	6 909	8 169	9 401	-
50	-	-	-	3 970	5 165	6 404	7 651	8 868	-
55	-	-	-	-	4 603	5 832	7 068	8 275	-
60	-	-	-	-	-	5 173	6 402	7 602	-
65	-	-	-	-	-	-	5 635	6 831	-

Power input in W

30	1 695	1 689	1 661	1 617	1 566	1 514	1 468	1 436	-
35	-	1 906	1 874	1 827	1 774	1 722	1 677	1 647	-
40	-	-	2 121	2 067	2 007	1 950	1 901	1 868	-
45	-	-	2 412	2 345	2 274	2 205	2 147	2 107	-
50	-	-	-	2 670	2 582	2 498	2 426	2 372	-
55	-	-	-	-	2 940	2 836	2 744	2 672	-
60	-	-	-	-	-	3 227	3 111	3 017	-
65	-	-	-	-	-	-	3 536	3 413	-

Current consumption in A

30	8.50	8.37	8.53	8.88	9.29	9.66	9.88	9.83	-
35	-	10.37	10.33	10.50	10.75	10.99	11.10	10.97	-
40	-	-	11.54	11.57	11.71	11.86	11.89	11.71	-
45	-	-	12.43	12.36	12.43	12.53	12.54	12.35	-
50	-	-	-	13.15	13.19	13.28	13.30	13.15	-
55	-	-	-	-	14.27	14.39	14.46	14.39	-
60	-	-	-	-	-	16.13	16.30	16.34	-
65	-	-	-	-	-	-	19.10	19.29	-

Mass flow in kg/h

30	47	64	83	104	126	149	171	193	-
35	-	60	80	101	124	147	170	192	-
40	-	-	76	99	122	146	169	192	-
45	-	-	71	95	119	144	168	191	-
50	-	-	-	89	115	140	166	190	-
55	-	-	-	-	108	135	162	187	-
60	-	-	-	-	-	128	156	183	-
65	-	-	-	-	-	-	147	176	-

Coefficient of performance (C.O.P.)

30	1.44	1.99	2.66	3.47	4.40	5.42	6.48	7.53	-
35	-	1.59	2.18	2.87	3.66	4.52	5.42	6.29	-
40	-	-	1.75	2.36	3.04	3.78	4.55	5.29	-
45	-	-	1.38	1.90	2.49	3.13	3.80	4.46	-
50	-	-	-	1.49	2.00	2.56	3.15	3.74	-
55	-	-	-	-	1.57	2.06	2.58	3.10	-
60	-	-	-	-	-	1.60	2.06	2.52	-
65	-	-	-	-	-	-	1.59	2.00	-

Nominal performance at to = 7.2 °C, tc = 54.4 °C

Cooling capacity	7 679	W
Power input	2 670	W
Current consumption	14.28	A
Mass flow	174	kg/h
C.O.P.	2.88	

Pressure switch settings

Maximum HP switch setting	45	bar(g)
Minimum LP switch setting	1.5	bar(g)
LP pump down setting	2.3	bar(g)

Sound power data

Sound power level	65	dB(A)
With acoustic hood	60	dB(A)

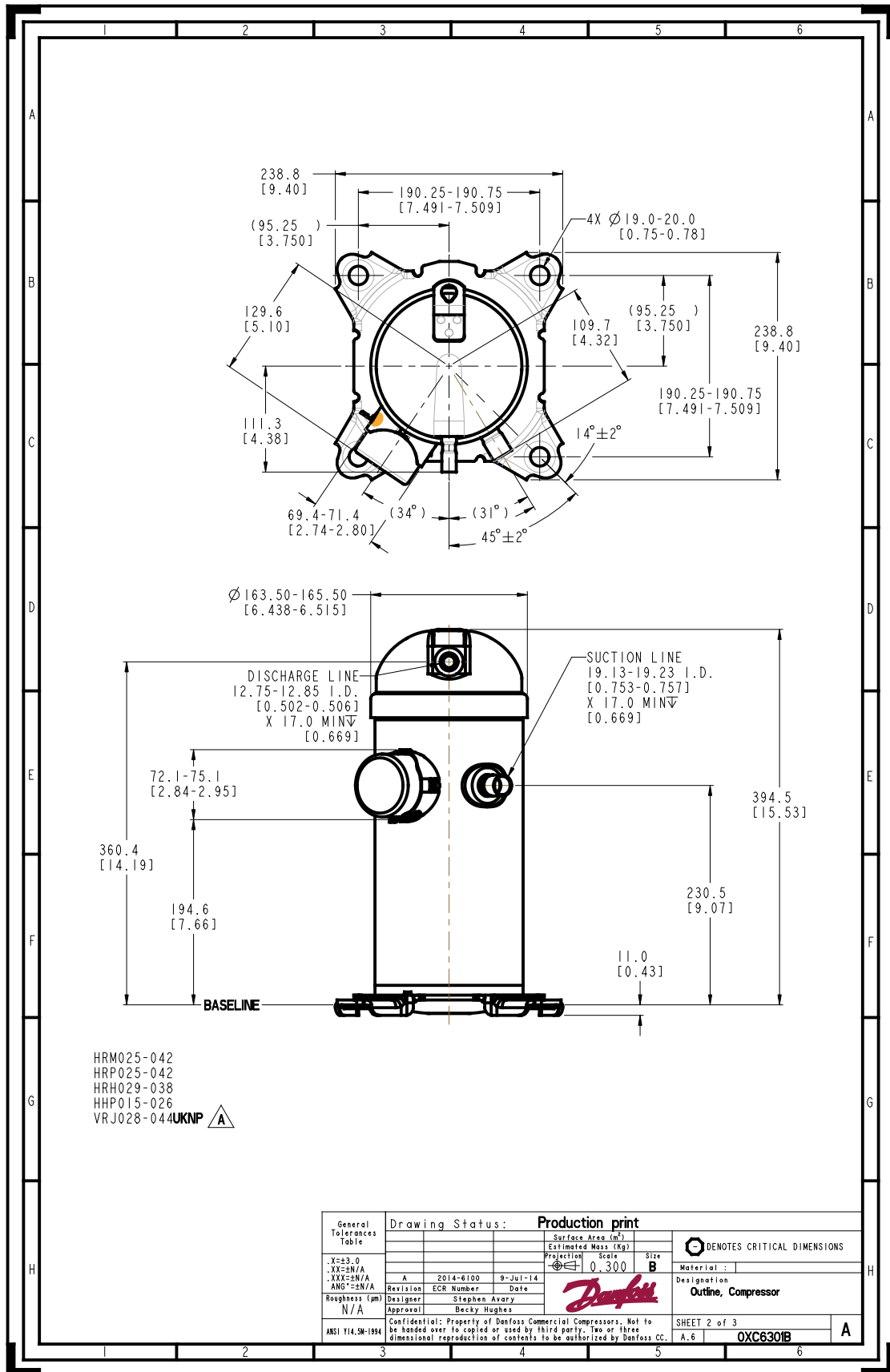
to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

Rating conditions : Superheat = 11.1 K , Subcooling = 8.3 K

All performance data +/- 5%

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